

Department of Defense Environmental Restoration Program



INDEPENDENT MANAGEMENT ANALYSIS

BY

CLEAN SITES

Summary Report for the Deputy Under Secretary of Defense (Environmental Security)

August, 1997



Introduction

At the request of the Deputy Under Secretary of Defense for Environmental Security, Clean Sites has conducted an independent review of the DOD Environmental Restoration Program.¹ We conducted this review in two phases.

The first phase was an independent assessment of the Department's progress in identifying and restoring contaminated areas. The second phase was a review of how the program is being managed by both the Office of the Secretary of Defense and the individual military Components.² This is the summary report for the second phase.³

Clean Sites obtained the information for the second phase of this review from several sources. The major source was a series of open-ended interviews with environmental restoration staff within the Department at headquarters offices and more than twenty-five installations throughout the country. We also interviewed a limited number of regulators, community members, and contractors.

A second source of information consisted of guidance documents, annual reports, data compilations, and briefing documents prepared by both the Secretary's office and the individual Components.

A third source of information was a Blue Ribbon Panel established by Clean Sites to review and comment on the study's approach and findings, and to provide observations and recommendations to Clean Sites on steps the Department might take to improve the management of its program. The Panel members included Superfund program managers from major private companies and contractors, Congressional staff, and representatives from the Congressional Budget Office, state and federal environmental regulatory agencies, and communities surrounding defense bases.

General Findings

Overall, our review found a number of positive and encouraging attributes of the Department's Environmental Restoration Program.

The staff members we interviewed were generally experienced, competent, and dedicated to the task of cleaning up contaminated sites quickly and cost effectively. They feel that they are well supported technically both by their contractors and by the Centers of Expertise the Components have established. In addition, experienced program managers were often able to exercise a surprising degree of flexibility in carrying out their responsibilities.

We also concluded that significant improvements have been in the program in recent years. Among the most important of these are:

- ✓ **The adoption of the relative risk site evaluation (RRSE) system for setting priorities.** The RRSE is a rational risk ranking system which incorporates the appropriate factors yet is simple enough that it can be applied to all of the Department's tens of thousands of sites in an expeditious and economical manner.
- ✓ **The emphasis on partnerships with regulators.** The recent emphasis on forming partnerships with federal, state, and local regulators appears to be paying off in quicker agreements and less delay in addressing cleanup issues.
- ✓ **Improved public involvement.** Although many cleanup decisions remain controversial, the emphasis on establishing Restoration Advisory Boards (RABs) including concerned members of the affected communities has provided a mechanism which allows the exchange of information and views, and an opportunity to establish a cooperative approach to resolving issues.

Clean Sites is a public interest organization established in 1984 to help governments, private companies, and communities find and implement efficient, effective and collaborative solutions to environmental contamination problems.

- ✓ **The collection of consistent site specific information.** During the 1980s, the program information appeared to be wildly inconsistent from year to year and from site to site. Actions taken over the past few years to improve the quality and consistency of management data appear to have eliminated most of these problems.

We also found that the program was making reasonable progress toward achieving its goals in spite of the fact that the program improvements identified above had been implemented so recently that they are just beginning to have a discernable impact on the program's progress.

We did find, however, that many opportunities for program improvement remain. This is to be expected in any program as large, complex and diffuse as the Environmental Restoration Program. With the adoption of the improvements listed above, the management emphasis needs to shift from one of making major program changes to making continued program improvement.

Communications

The Environmental Restoration Program has a number of characteristics that place a premium on effective and efficient communications systems. It is large and diffuse; it is necessarily undergoing constant modification in policies and processes; it is constantly having to respond to new technical, financial, and political issues; and it requires a consistency of approach in addressing disparate situations. All of these factors emphasize the need for a clear and consistent articulation of the program's mission, vision, and goals, and effective communication vertically (i.e., up and down through the chain of command) and horizontally (i.e., among peers). Our review found that the program has taken some steps to address these communication needs, but that much more needs to be done.

Strengths: The program has adopted a clear, concise set of goals for what it wants to accomplish and when. These goals have been consistently communicated to the staff and have served to clarify the major program priorities. The more experienced staff members also appear to have a fairly consistent concept of the program's mission.

Vertical and horizontal communications at the top of the program (i.e., between the ODUSD(ES)⁴ and the top

program managers in the different Components) also appear to be efficient. The establishment of the Cleanup Committee has provided a formal mechanism, complementing frequent informal communications, for ensuring that the top program managers have substantial opportunity to address and resolve issues expeditiously and consistently.

Each of the services also holds one or more annual meetings for program management officials and RPMs to promote vertical and horizontal communications and to communicate and discuss policy, process, and technical issues.

Finally, we frequently found evidence of informal communication channels that allowed staff to obtain necessary information quickly and effectively.

Weaknesses: For the most part, however, good communication is a major weakness in the program. Although the program has adopted a set of clear and concise goals, the Department has not articulated a clear mission or vision for the program. Furthermore, the goals have only been formally established for the program as a whole. Each of the Components has accepted its *pro-rata* share of these goals, but, because they have not been allocated further down the system, they have little meaning below the program management level.

Similarly, although the goals establish the program's major priorities, there is no clear statement of other factors that should be considered in setting priorities or how such factors should be weighed. As a result, the different Components have adopted their own procedures for priority setting, and it is unlikely that these different approaches result in consistent priorities across the Department.

Vertical communications channels are slow, inefficient, and largely opaque. The time required to translate policies into formal guidance documents often exceeds a year and sometimes two. By the time a guidance document is available, the policies that it incorporates may well have been modified. Individuals at the bottom of the information chain have little idea where the policies originate (i.e., they cannot see up through the chain), and people at the top have little idea what policies are actually being implemented and how.

There is little horizontal communication among the different Components except at the top of the system. As a result, RPMs in the different services have limited

opportunity to learn from one another's experience, or to ensure that the different Components are implementing similar policies in the same region.

Finally, although the RPMs feel they are inundated with documents setting forth policies, providing guidance, and furnishing information, they may not have ready access to the information they actually need when they need it.

Recommendations: The Department should articulate a clear statement of the program's mission and vision so that everyone has a common understanding of what the program is attempting to accomplish and how. Similarly, the senior program management should agree on a consistent set of factors for setting priorities. Although the Final Report of the Federal Facilities Environmental Restoration Dialogue Committee⁵ sets forth a number of these factors, they need to be interpreted in a manner which provides more useful guidance to decision makers throughout the program.

The Department should allocate the program goals formally to the Components, the Components to the major commands, and the major commands down to the individual installations. Everyone in the program should have a clear understanding of his or her responsibility for helping the program achieve its goals.

With respect to the more general communications problem, the Department should explore the possibility of converting the primary means of communication to an electronic medium. A good Internet or other electronic communications system would appear to be the most efficient and effective means of solving the program's communications problems.

Quality Assurance and Quality Control

Quality assurance and quality control (QA/QC) systems are essential to the effective operation of any management system. This is particularly true in a program like the Environmental Restoration Program where individual staff members are making decisions under substantial uncertainty in diverse situations. The only way for the Department to be confident that the Environmental Restoration Program is operating efficiently, effectively, and consistently is by implementing an effective QA/QC system. Such a system is also fundamental to the implementation of a meaningful process of continued program improvement.

Strengths: The Department and the individual Components have established some of the elements of a QA/QC system. Some of the Components have instituted peer review process. Others have depended on substantial staff reviews. All of the Components have established centers of technical expertise which the RPMs believe provide good and up-to-date technical support. Finally, the Components and ODUSD(ES) are applying QA/QC to the program management data that the system is providing, resulting in increased confidence in the quality of this information.

Weaknesses: The Department does lack, however, a comprehensive QA/QC program for ensuring that priorities are being applied consistently, that the remedies being adopted are appropriate and consistent, that they are making use of the best technologies, and that progress is being made as cost-effectively and rapidly as possible. An effective QA/QC program is necessary for the Department to be able to assure itself, Congress, and the public that the cleanup program is being implemented efficiently and effectively, and to identify opportunities for continued program improvement.

Recommendations: The Secretary's Office, in association with the different Components, should institute a structured, comprehensive QA/QC process for the entire program. This process should place an emphasis on constructive support, not criticism of the RPMs. Its purpose should be to improve the consistency and quality of current and future program decisions, not find fault with those that have been made. In order to promote cross-Component communication it should have rotating memberships from all of the Components. The program would also benefit from including participants from outside DOD, and perhaps by having the process organized and facilitated by a neutral organization.

Project reviews should be made in a timely manner so that there is an opportunity for projects to be modified without disrupting established agreements or understandings. The sampling protocol should favor those installations where significant cost savings might be identified, but should also provide the necessary assurance that the entire program is being carried out efficiently.

As part of the quality assurance and quality control process, the Department should explore opportunities for bench marking some of its standard procedures. Such bench marking is difficult in remediation programs, but we have identified at least two private firms

that may be interested in cooperating with DOD in such an effort.

Contracting

Since most of the program's assessment, design, and construction work is done by contractors, the efficiency of the contracting process substantially influences the overall quality of the program. Some of the primary considerations are the type of contract, the incentives facing the contractor, the ease of issuing task orders, and the amount of choice available to the RPM.

Strengths: The contracting process adopted for the Environmental Restoration Program has many positive attributes, and the RPMs appear generally to be satisfied with the contracting vehicles available. Most of the contracting is done through long-term (up to ten years) mission contracts issued by regional contracting offices. Individual projects are then addressed through task orders issued under these mission contracts.

This approach can simplify the process of contracting for individual projects and allow an ongoing relationship to develop between the contractor and the installations being served. The current process also provides for some degree of competition, providing RPMs with a limited opportunity to select contractors with special skills or having particularly favorable prices.

The Department is also moving toward more efficient contracting vehicles such as unit price contracts. Finally, the Department has developed a cost estimating tool (The RACER Model) which appears to give reasonably good remediation cost estimates when the user has sufficient information.

Weaknesses: Many of the RPMs thought that the administrative process was still too burdensome and both the administrative costs and the unit prices were frequently too high with the existing contracting vehicles. Although there is some opportunity to select among contractors, competition is generally constrained. More experienced RPMs who know how to "work the system" are more likely to take advantage of the flexibility that exists than are less experienced staff members. The constrained competition and administrative burdens may be an important factor contributing to high costs. Finally, although the contracting offices are moving to more efficient contracting vehicles, the use of these vehicles is not consistent.

Recommendations: ODUSD(ES) and the Components should establish a special task force to define and implement the next move toward more efficient and lower cost contracts and contracting procedures. Particular attention should be given to performance based contracting, increasing the amount of competition in the contracting process, reducing administrative and other overhead burdens, allowing a more efficient combination of different tasks into single contracts, and increasing the range of contract types available.

The team undertaking these reviews should include acquisitions specialists, RPMs, and other program managers involved in and managing the acquisitions process. Because of the importance of the contracting process in the implementation of the program, the Department should consider conducting such reviews periodically -- perhaps biennially.

Cooperation

Experience in both the private and public sectors indicates that cleanup programs and projects proceed more smoothly and efficiently if there is a sense of cooperation and partnership among the major stakeholders. This partnership should include federal, state, and local regulatory agencies, the community, and local government. Such a cooperative approach will not eliminate all disagreements and conflicts, but it will eliminate many, and make it easier to resolve those that remain.

Strengths: The recent emphasis on forming "partnerships" with the regulatory agencies is clearly having some beneficial results in terms of reduced conflicts and faster decisions. This move toward cooperation has been helped by the fact that both the Department and the regulatory agencies are apparently experiencing a lower rate of staff turnover than previously, resulting in increased continuity with more experienced and confident staff. With the Department's increased emphasis on public participation and the formation of RABs at every major site, the community involvement element of the partnership has also improved significantly.

Weaknesses: The efforts to improve working relationships with regulatory agencies and provide for more meaningful public involvement are still a work-in-progress. The partnership approach continues to meet resistance within both DOD and the regulatory agencies. Many installations are also finding it difficult to organize sustained, constructive public involvement.

There are a number of reasons why such difficulties should be expected. The culture of the nation's cleanup program has, unfortunately, generally been one of conflict rather than cooperation. The Department has not traditionally been accustomed to being regulated or working with the public. And many RPMs have a technical background with limited experience or training in working with the public and regulatory bodies. Effective public participation also has to take place outside of normal working hours, placing an added demand on staff who already are heavily burdened and may see these efforts as a diversion from their primary responsibilities.

All these problems are compounded by a frequent lack of agreement on the mission and goals of the program, and by differences in the organizational structure between DOD and the regulatory agencies. These organizational differences have inhibited effective cooperation at mid-management levels, frequently delaying the resolution of issues that cannot be solved at the installation level.

Recommendations: In addition to continuing its emphasis on the partnership approach, the Department should sponsor an independent assessment of the issues which may be inhibiting cooperative efforts, and the opportunities for improving partnerships and public participation. This assessment should involve confidential interviews with the regulatory partners with a goal of identifying a series of steps that can be taken to improve cooperation.

Some conflicts, however, are bound to appear. To help resolve these, the Department should consider establishing a mechanism for parties to the conflict to request the assistance of a neutral facilitator to conduct an independent assessment of the factors underlying the conflict.

Management Structure and Process

The Environmental Restoration Program, as important as it is, is different in many respects from the core programs of the Department of Defense. This makes it difficult to determine how best to relate the program's management, with its special requirements and expertise, with the Department's overall management structure.

Private companies have similarly had to grapple with the question of how to manage the cleanup program without interfering with the organization's principal functions. There is no 'right' organization (as evidenced by the fact that different companies known for the quality of their remediation programs have adopted quite different management approaches) but clearly an efficient program depends upon an efficient management structure.

A management issue raised by many interviewees is the amount and type of information that top management should be collecting about individual sites. This is particularly an issue in the Department of Defense where the Secretary's Office retains responsibility for providing detailed reports on the program and defending it before Congress, yet the management responsibility and authority have devolved to the individual Components.

Strengths: The Components have shown substantial flexibility in experimenting with different management approaches to improve program implementation while respecting traditional management structures. Some appear to have achieved efficiencies by decentralizing authority and reducing the layers of review and approvals required. Decentralization, however, can create problems of inconsistency.

The Department has also made efforts to improve the stability and predictability of information collection requests so that they should require less effort to fulfill and cause less disruption of the system. Although the Department is collecting extensive amounts of very detailed information, most of this information is now relatively stable and substantial effort should not be required to keep most of it up-to-date.

Weaknesses: Some of the management structures appear convoluted and inefficient with an excessive number of intermediary layers of review. Some have separated lines of authority from lines of responsibility. In most, responsibilities at the various levels in the organization are not well defined. For instance, we found strong disagreements about such fundamental questions as whether the RPM's job should be predominately technical or administrative.

The "data call" problem has not been solved. RPMs believe that they are being required to provide too much information too frequently. Some of this is required by the Department, some by the Components, and some by special Congressional information requests. Often the

individuals supplying the information have no idea why it is wanted or what it is used for. This lack of information further diminishes their enthusiasm for responding to requests for more data.

Recommendations: The Components should review their management structures to search for ways of improving efficiency and responsiveness. In this process they should try to clarify roles and responsibilities, and attempt to eliminate conflicts between lines of authority and responsibility.

The Department should also periodically review the need for the information it is collecting. Program staff considered the requirements for site specific expenditure and budgeting data to be particularly onerous, and point out that the information is often inaccurate -- particularly for smaller sites where individual contracts may cover a number of sites in order to reduce contracting costs, obtain better contract price, and increase management efficiency. In a program as large as the Environmental Restoration Program, information requests become very expensive to fulfill. A couple of hours spent providing information for each of 15,000 sites can result in a multi-million dollar hidden cost.

Incentives

Few programs work well if the staff responsible for implementing them does not have strong positive incentives to accomplish the program goals. It is, however, extremely difficult to create such incentives in government programs. This is particularly true when the program is not an integral part of the agency's primary mission. The problem is exacerbated when a primary purpose of the program is to put itself out of business. The commitment and dedication of the Department's environmental restoration staff are particularly remarkable in light of the strong negative incentives inherent in this program.

Strengths: The Department and Components have established recognition programs for individuals and installations that have done particularly well in implementing the program. Installations and major commands have some incentive to close out sites so that they can divert the resources they are using for managing cleanups to other purposes.

Weaknesses: The Environmental Restoration Program incorporates even more negative incentives for staff than most government programs. The Department appears to have given insufficient consideration to the importance of these incentives and how to offset them. In addition, like many government programs, there are often no clear consequences for poor performance.

Recommendations: The management reviews recommended above should give explicit and serious attention to how to reduce negative and emphasize positive incentives for both individuals and organizational units. One step in this direction for individuals would be to identify and advertise opportunities for career advancement for staff that perform well in the Environmental Restoration Program.

Conclusions

The Environmental Restoration Program provides the Department with a daunting management challenge. In recent years, the Department has undertaken some significant steps to meet that challenge. However, much can still be done to improve the program and make the cleanup process more efficient. The focus should now be on continued program improvement rather than making significant program changes.

Notes:

1. The term Environmental Restoration Program is used here to refer to both the Defense Environmental Restoration Program and the cleanups being conducted under the Base Realignment and Closure Program.
2. The term Components is used in this report to refer to the separate military departments and the Defense Logistics Agency.
3. The results of the first phase were presented in two reports: a "Program Performance Report", and "Report Highlights" submitted to the Deputy Under Secretary's Office in June, 1996. This report summarizes the conclusions and recommendation contained in the full project report entitled Program Management Review which is being concurrently submitted to the Department of Defense.
4. ODUSD(ES) is the Office of the Deputy Under Secretary of Defense for Environmental Security
5. The Federal Facilities Environmental Restoration Dialogue Committee, *Final Report: Consensus Principles and Recommendations for Improving Federal Facility Cleanup*, April, 1996.